Applicant: Stephan B. Sears

U.S. Serial No. 09/719,230

Filed: November 20, 2003

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REMARKS

Claims 1-8 were pending. Claim 8 was elected, with traverse. Claims 1-7 have been

cancelled herein. Accordingly, Claim 8 is pending and being examined.

Support for the amendment to claim 8 is merely to correct the antecedent basis. The term

"water" is replaced with the term "liquid". Accordingly, this change does not involve

new matter and its entry is respectfully requested.

RESTRICTION REQUIREMENT

The Patent Office is requiring election to one of the following inventions under 35 U.S.C.

121, Claims 1-7 drawn to a Water Processing Device, classified in class 210, subclass

175+, and Claim 8, drawn to A Liquid Seal, classified in class 277, subclass 431.

ELECTION

Applicant hereby affirms its election of Claim 8 of Group II.

THE REJECTION UNDER 35 USC §112, SECOND PARAGRAPH

Claim 8 has been rejected as being indefinite for failing to particularly point out and

distinctly claim the subject matter which Applicant regards as the invention. Specifically,

the Office alleges that there is antecedent basis for the language "the water," in line 6 of

Claim 8.

Applicant has amended Claim 8 to correct the language from "the water" to "the liquid,"

providing antecedent basis for this language and removing the basis for this objection.

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THE REJECTION UNDER 35 USC §103(a)

Claim 8 has been rejected under 35 USC 103(a) as unpatentable over Ravitts in view of

Wyczalkowski et al.

U.S. Patent No. 5,855,472 ("the '472 patent") discloses a submersible seal to prevent

liquid intrusion along a shaft into a motor (i.e. "ingress of fluid"). The seal itself has a

stationary and a rotating element. The stationary element is a tube attached to the motor

casing. The rotating element is cylindrical that surrounds the stationary tube forming a

"labyrinth passageway," that contains "at least one reverse bend." An air cushion is

formed between the stationary and rotating elements of the seal preventing ingress of any

liquid into the motor.

In the present invention, the water seal operates to prevent gas from the boiler cavity

escaping up and out of the shaft, around the reduction gear shaft. As depicted in Figure

13 of the present application, the water seal comprises a simple, single hollow tube,

surrounding the shaft of a wiping device and does not incorporate a contained air pocket

("cushion") as in the '472 patent.

Therefore, the '472 patent does not render obvious, and in fact, teaches away from the

present invention. Thus, there is no suggestion or incentive for combining a reference

such as the '227 patent by Wyczlkowski et al. with the '472 patent. Moreover, such a

combination does not result in the presently claimed invention.

U.S. Patent No. 6,464,227B1 to Wyczlkowski et al. ("the '227 patent"), discloses a fluid

seal or "manometric seal," with multiple components for optimizing the rotation speed of

a mixing element and minimizing evaporation. The Office characterizes the '227 patent

as providing a disclosure of "equal pressures in the tube and outside the tube," to

"regulate the fluid level in the seal." (Office action, page 4).

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In one embodiment of the device disclosed in the '227 patent, fluid within an outer

container (3 of Fig. 2) that is open to the outside, flows into a chamber (not marked but

corresponds to 6 of Fig. 2) that is open to air trapped within an inverted container (1 of

Fig. 2) which is submerged in the same fluid. There is no element in the '227 patent that

corresponds to a hollow "tube," which encircles a shaft and prevents leakage of vapor

from inside the tube to the ambient air on the top of the fluid in the tube, as in the present

invention. (see Figs 1 and column 2, lines 16-43, and Figs 2 and 3 of the '227 patent).

The chamber (6 of Fig. 1 and unlabeled in Figs 2 and 3) opens to air within the inverted

container 1 directly above the liquid in the chamber and prevents air bubbles from exiting

the outside of the chamber to the ambient air.

Thus, the '227 patent also teaches away from the seal of the present invention. Moreover

there is no incentive for modifying the chamber of the seal in the '227 patent to replace or

modify the seal of the '472 which is directed to preventing liquid from leaking down into

the shaft and into the motor.

Even if the chamber of the '227 patent was placed into the device of the '472, in an

analogous position, it would operate, if at all, to prevent air bubbles within the liquid

inside the rotating seal element of the seal of the '472 patent, from exiting into the liquid

on the outside of the rotating seal element and into the air above the liquid outside the

rotating seal element. Thus, the chamber of the '227 patent is more analogous to the

compartment formed within the rotating seal element of the seal of the '472 patent.

Neither the '472 patent, or the '227 patent, alone or in combination, suggest the present

seal device which is configured as a hollow tube encircling a shaft, that operates to

prevent vapor escape in the liquid surrounding the shaft into the air above the liquid

within the tube, as in the present invention.

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Therefore, the rejection of Claim 8 should be withdrawn and the claim allowed.

CONCLUSION

If a telephone interview would be of assistance in advancing the prosecution of the subject application, Applicants' undersigned attorney invites the Examiner to telephone her at the number provided below.

No fee, other than the fee for extension of time, is deemed necessary in connection with the filing of this response. Applicants hereby enclose a check in the amount of \$55.00 for a one-month extension of time. If any further fee is necessary, the Patent Office is authorized to charge any additional fee to Deposit Account No. 50-0306.

Respectfully submitted,

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